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The Maryland Fruit Grower

February, 1934

Maryland State
Horticultural Society

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The Maryland Fruit Grower

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W. EARLE WITHGOTT

It is with a sincere regret that the announcement is made of the death of our President, W. Earle Withgott. Senator Withgott passed away at Union Memorial Hospital, Baltimore, on Thursday, February 8, 1934.

He had been in ill health for several months, suffering from what was apparently the effects of over-work. Senator Withgott had been identified with business interests in Easton, especially that connected with financial institutions and the canning and fruit growing industries. Held in high regard by his fellow citizens, he was elected as Senator to the State Legislature in 1926, since which time he has been serving continuously, in a capable and fearless way.

Senator Withgott was 43 years of age. He served in the World War as a captain in the Twenty-ninth Division. Surviving him are his widow, formerly Miss Louise C. Crane of Chestertown; a daughter, Louise Betsy, and a brother, Julius H. Withgott.

Senator Withgott was elected President of the Maryland State Horticultural Society on January 4, 1934. He was in Florida at that time trying to regain his health, and from his sick-bed, recently wrote expressing gratitude for the honor accorded him and pledging his best efforts.

Those who knew Senator Withgott admired him for his sincerity and honesty. Truly Maryland has lost an excellent citizen, and the farmers of the State have lost an ardent champion of their interests.

TAR OILS

In 1931 Dr. R. H. Hurt reported some work with tar oil distillate sprays, at the Virginia State Horticultural Society meetings, giving favorable reports of the control of rosy aphis, and this material was marketed commercially, but it just seemed to be another one of those things that we read about. With the last season's heavy damage by apple rosy aphis, tar oil distillates, or "tar washes", as they are commonly called, have come into prominence.

We must remember that tar oils are rather new, and that care must be used in the selection of the proper grade of this material. However, the reliable manufacturers may be depended upon, to give the grower a safe product. Reporting in the 1933 Proceedings of the Virginia State Horticultural Society, Dr. Hurt states that the majority of tar oil distillates contain tar acids, tar bases, and neutral fractions but this material is then distilled, and tar acids are removed, down to 1 or 2 percent, the tar bases rarely being removed from the neutral fractions of the tar oils. This material, then, with low tar acid content is adapted to spraying purposes.

The aphis egg has three skin coverings, and the outer cover is resistent to practically all materials, except tar oil distillate sprays, which break down, or disintegrate the outer shell, exposing the young aphid to death, by exposing the inner contents of the egg, to evaporation. According to Dr. Hurt, the tar oil distillate creosotes affect the egg shell, and tar acids seem to have little or no effect upon the egg, due partially to the fact that the acids do not coat the egg.

This point shows the necessity of thorough coverage of the tree, to get a coating of the material on all of the eggs.

There will probably be some irritation to the skin of the spraymen and horses, when tar oils are applied. This may be somewhat overcome by waterproof covers over the horses, and by avoiding windy weather in spraying. Hartzell and Parrot of New York, state that burning of the skin may be lessened by washing with vinegar diluted to 1 part vinegar in 3 parts water. Rubbing alcohol is also very effective. The spraymen should wash their faces thoroughly, at noon and night, with soap and water, then apply rubbing alcohol (externally) and rub in well. Greases or oils applied to the skin may not be very effective and on warm days, are best not used. Such materials as alcohol or vinegar, are used to neutralize, chemically, the effects of the tar oil materials which cause skin irritation.

Tar oils, of course, should be applied when the trees are perfectly dormant, in fact, many growers have already finished with their dormant spraying. The oils should be applied, however, on balmy, quiet days, if possible, when temperature is 45° or higher, and when it is not expected that temperatures will not go much below freezing for about 10 hours following the spray application.

There will be some difference in the mixtures used in dormant spraying, depending upon San Jose scale, etc. Look over the 1934 Spray Calendar carefully. It is advisable that the average fruit grower buy commercially prepared tar oil or combination, to avoid mistakes in mixing the material himself.

Questions regarding tar oils should be addressed to Dr. E. N. Cory, State Entomologist, College Park, Maryland.

A superior FRUIT FERTILIZER

'AERO' *Granular* CYANAMID

BECAUSE—

It feeds trees evenly throughout season
It grows large dark-green leaves
It holds leaves on entire summer
It produces good set of fruit and fruit buds
It improves color of fruit
It increases yield

and Because—

It is the only nitrogen fertilizer that carries hydrated lime to sweeten the soil.

ONE TON OF 'AERO' CYANAMID SUPPLIES 1400 POUNDS OF HYDRATED LIME IN ADDITION TO 440 POUNDS OF NITROGEN

For further information, write

AMERICAN CYANAMID COMPANY

Manufacturers of 'Aero' Cyanamid and 'Ammo-Phos'

535 FIFTH AVENUE NEW YORK, N. Y.

Cyanamid is NITROGEN plus LIME

PRESIDENT'S ADDRESS

The address of President G. S. L. Carpenter given before the last meeting of the Society, expresses so simply and concisely, the whole problem of fruit growing, that it is offered for the thoughtful reading of fruit growers:

FELLOW FRUIT GROWERS:

Since 1930, the fruit industry in this section has experienced many difficult situations.

The droughts of 1930 and '32 injured all orchards.

The dry, hot weather prevailing for the past few years has been favorable for the rapid development of insects.

The economic conditions prevailing throughout the World forced our growers to reduce the expense of their operations.

Measures adopted by countries consuming large quantities of our apples largerly eliminated our export outlets.

We have, therefore, experienced the most difficult conditions under which our fruit could be produced and marketed.

DROUGHTS

The droughts of 1930 and '32 developed many of the weaknesses of individual trees and of entire orchards.

Individual trees not having healthy root systems suffered most, dying back from the tips of the branches; in many instances, followed by black rot cankers, which destroyed either limbs or entire trees.

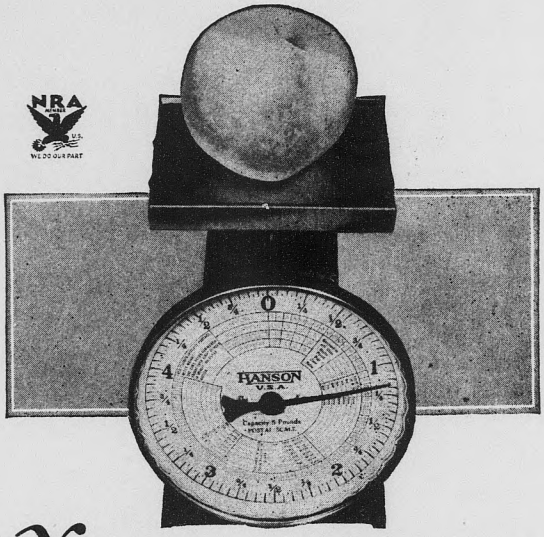
Certain soil types were shown to be poorly suited for profitable fruit growing. Apples planted on the Chert Mountain soils suffered the least and justified the confidence of the Millers of Paw Paw, and those who have since followed them in planting orchards on this type of soil—the Leathermans, Cornwells and, among others, Walter W. Farris, one of the past Presidents of our society.

Limestone soils, and particularly those where the outcroppings of rock do not limit root development, have proven satisfactory.

Orchards planted on shale soils, and particularly those shallow in character, have suffered most. On this type of soil, cover crops, which are important on all soils, determine the possibility of operating these orchards successfully.

INSECTS

Because of favorable weather conditions, insects have established themselves in most of our orchards; and owing to the tolerances for arsenic, florine and lead, many of our growers in the East have been reluctant to apply sprays late in the Summer that would necessitate the removal of residue by washing. For the coming year, we must use the most effective insecticides, combining them, when conditions require, with materials to increase their efficiency. We must first plan to control insects not only with spray materials but with bands and other sanitary measures. Should the population of insects in our orchard require heavy applications of spray materials, we should first plan to control worms; and then plan the removal of the residue by washing. Many growers will not find this necessary if their orchards have been kept relatively free from worms; but in those orchards where serious damage occurred this past year, do not try to "straddle the fence". The control of insects and diseases is the most important of all orchard operations. Good fruit *only* brings satis-



You can be sure of fine fruit

WHEN YOU SPRAY WITH

KOPPERS

FLOTATION SULPHUR

Koppers Flotation Sulphur is known everywhere for the beautiful finish it gives to fruit—and for its sure, safe and dependable control. Horticultural experts have tested and approved it, and it is used, year after year by thousands of growers who have learned from experience that its microscopic ultra-fineness gives it important advantages obtainable in no other product in this field. For better fruit and bigger profits, spray with Koppers Flotation Sulphur.

The Original and Genuine Flotation Sulphur carries the Koppers Name and the above trade mark. Look for it always.

KOPPERS PRODUCTS COMPANY

KOPPERS BUILDING **PITTSBURGH, PA.**

factory returns in packages or at the by-product plants. Good fruit must be grown if the orchard is to be profitable.

ECONOMIC CONDITIONS

Economic conditions have acted as a two-edged sword in depreciating the value of fruit both in our foreign and domestic markets, reducing the grower's income for fruit produced. This made necessary the reduction in operating expense at a time when the orchards required the best treatment.

Pruning was partially or totally eliminated following the drought injury, when relatively heavy pruning was necessary to restore the balance between the roots and the trees.

Fertilization was totally or partially eliminated when the trees required it most to restore lost vigor.

Cover crops were totally or partially eliminated when additional cover crops were necessary to restore the vegetable matter lost in the drought years and to maintain and increase the vegetable matter, which is deficient in all of our soils.

Spraying was eliminated whenever a grower thought he might take a chance; and, in many instances, eliminated entirely; where funds were not available. This was at a time when the tree needed to have every leaf a healthy leaf in order to restore its normal vigor.

Where the neglect was greatest, orchards have reached a condition where they can no longer be maintained; and much acreage will be entirely eliminated from commercial production.

EXPORT MOVEMENT

This district probably depends more on export outlets than does any other apple producing section in the United States. While no accurate figures are available, information received indicates that approximately 65% of the production of apples in Virginia, West Virginia, Maryland and Pennsylvania is exported in normal years. A curtailment of this outlet is, therefore, a most serious matter for our growers. For the past few years, many types of restrictions have been set up that have checked, and, in some instances, practically eliminated our exports of apples. These restrictions have likewise assisted in building up apple production in many foreign countries.

Our export business has benefited materially from the devaluation of the dollar; and had it not been for this action on the part of our Government, our export movement would have been on an unprecedented low level.

Recently, the first of a new type of reciprocal arrangement was effected with France, by which France guaranteed a market for 20,000 tons of American apples and pears in exchange for an increase in our liquor import quota to them, of 784,000 gallons of French wines. This provides a market in France for the balance of this season of about 1,000,000 bushels of American apples, as the pear exporting season is almost terminated. Further agreements of this character may eventually lead to the restoration of a great portion of the export movement, which was formerly enjoyed.

At this time of the year, growers are making plans for the production of a crop of apples almost a year in advance. It is impossible to forecast the conditions that will prevail at the time when this fruit will be harvested and placed upon the market. Good fruit must be grown if the operation is to be profitable. This means:

First, the control of insects and disease.

Second, the washing of the fruit if necessary.

Third, the handling of other orchard operations as well as conditions will permit.

Last year, the most successful orchardists in this district were those who did not cut corners or take chances, but performed each operation as well as they knew how. There is no reason to believe that this condition will not hold true this year.

COLOR ON APPLES

Dr. L. A. Fletcher is the author of Maryland Bulletin 353, recently published by the Maryland Agricultural Experiment Station, College Park, Maryland. The bulletin title is, "A Study of the Factors Influencing Red Color on Apples". Growers interested, may obtain a free copy by writing to the above address.

Dr. Fletcher made an extensive study of the causes of color in apples, the work being done cooperatively by the U. S. Department of Agriculture and the Maryland Agricultural Experiment Station.

The summary of the bulletin should be of interest to every fruit grower:

"1. Investigations of factors influencing the red color development on apples were conducted in several orchards near Hancock, Maryland, from 1927 to 1932.

2. The use of such fertilizers as potassium sulphate, potassium chloride, superphosphate, lime, and sulfur, had no effect on red color development on apples under the conditions of these tests.

3. The use of such chemicals as citric acid, magnesium sulphate, manganese sulphate, ferric carbonate, and ferric sulphate had no effect on red color development.

4. Fall or early spring applications of nitrogenous fertilizers which stimulate growth have tended to reduce color of fruit. Midsummer or late summer applications have generally had no measurable effect on color. In one test with Stayman Winesap trees in low vigor, color appeared to be reduced following a midsummer application.

5. Additions of sugar to the soil increased the carbohydrate content of the fruit slightly and also increased red color development in most cases.

6. Irrigation during seasons of limited soil moisture resulted in increased color on fruits of the Rome Beauty, Wealthy, Jonathan, and York Imperial varieties. In such a season the fruits of Oldenburg, picked relatively early, did not respond to irrigation in quantity of color but did respond in quality of color.

7. Irrigation during a season of relatively high rainfall resulted in decreased color on fruits of the Rome Beauty and Oldenburg varieties.

8. Systematic fruit thinning to provide an adequate leaf system in proportion to the fruit markedly improved color development and materially reduced the deleterious effects on color, of spring nitrogen applications.

9. The injection of sugar solutions, hydrochloric acid, and boric acid into limbs resulted in slight defoliation and a slight increase in color of fruits. Injections of sodium nitrate and malic acid resulted in a decrease in color formation.

10. Enclosing the fruit in red cellophane bags which do not transmit the

blue end of the spectrum inhibited red color development on apples.

11. There is a greater ultra-violet radiation on clear days following cool nights than on clear, sultry days.

12. Maximum color was obtained on trees carrying a moderate load of fruit well distributed over the trees, with sufficient moisture supply to provide a steady growth of fruit throughout the season."

HISTORY

The Maryland State Horticultural Society held its first meeting in Baltimore, on December 14 and 15, 1898. Mr. Charles G. Biggs was the first President of the Society.

At the first meeting, twenty-three County Vice-Presidents were appointed, each county having a representative. This group of men served as an executive committee. Mr. Arthur L. Towson of Smithsburg was appointed as Vice President from Washington County, at the first meeting, and became President of the Society in 1904. Mr. Towson was present at the January 1934 meetings.

Dr. H. J. Patterson, Director of the Maryland Agricultural Experiment Station has attended every one of the 36 annual meetings of the Society, which is a record that stands alone, so far as is known.

HAVE YOU READ THE ADVERTISEMENTS?

AMERICAN FRUIT GROWER

Mr. John T. Bregger, Editor of the American Fruit Grower Magazine is working hard to make that magazine the real medium for the fruit growing industry. Why not write a postal to American Fruit Grower Publishing Company, 1370 Ontario Street, Cleveland, Ohio, asking for a free sample copy? After looking it over, if you decide to subscribe (3 years for $1.00 or 1 year for 50c) send your name, address and check, cash or money order (payable to A. F. Vierheller) to the Secretary, A. F. Vierheller, College Park, and it will be forwarded. The secret is that if subscriptions come through Horticultural Societies, the Society is allowed one-half the subscription price for the Society treasury. Here is a painless way to help yourself and the Society. You won't regret it.

MEMBERSHIP

New members and old members are sending in their 1934 membership dues. Let's have a bigger, better Society. That means more members. Please send in your membership and get your neighbor to join. Remember the banana—as soon as it leaves the bunch, it gets skinned. Let's stick together.

FOR SALE

PEDIGREED KOREAN LESPEDEZA, DODDER FREE, 99.70% Pure. This strain produces excellent results in orchards and thrives on poor soil where clover and alfalfa would fail. This is the cheapest soil building legume and does not require lime, fertilizer or soil preparation. We will be glad to give you the benefit of our experience with this crop, which extends over a period of four years.

The Glasgow Company, Glasgow, Virginia.

OPPORTUNITY

Buy and Plant This Fall Before Prices Advance

Don't be one of those who will say, "I WISH I HAD BOUGHT MY TREES."

ACT NOW

We have one of the largest and most complete assortments of high grade fruit trees and ornamentals available today.

WE SPECIALIZE IN

PEACH AND APPLE TREES

Our peach trees are extra fine this year. Just the kind of trees that grow and make an orchard you can be proud of. All leading commercial varieties, including:

GOLDEN JUBILEE

—AND—

SHIPPERS LATE RED

The quality of our apple trees is well known. We have the same dependable trees to offer this year. You should know more of our new varieties:
RICHARED DELICIOUS BLAXTAYMAN GALLIA BEAUTY
RED ROME LOBO McINTOSH

They Mean Added Profits for the Fruit Growers

A complete list of all leading commercial varieties of apples, both one and two-year trees.

Thousands of Extra Fine 2-Year Old
YORK IMPERIAL TREES

We also specialize in small fruit plants such as Strawberries, Raspberries, Blackberries, and Grapes. We have all leading commercial varieties.

WE SELL DIRECT TO THE PLANTERS AT FAIR PRICES

Send for our complete price list today and buy from no nursery until you receive our prices and know more about the

Bountiful Ridge Nurseries

PRINCESS ANNE, MARYLAND

PRATT'S OIL SPRAYS

For Every Need and Every Purse

The oil emulsions which we offer in addition to SCALECIDE are made with the same care and selection of ingredients as made SCALECIDE the great and popular spray that it is. They are priced so low we caution you not to confuse them with crudely manufactured sprays. Choose your dormant spray from this imposing list.

SCALECIDE—the complete dormant and delayed dormant spray.

PRATT'S "83"—the 83% lubricating oil emulsion.

TAR-O-WASH—the 50% tar and 33% lubricating oil emulsion.

STRAITAR—the 85% tar oil emulsion.

PRATT'S "66"—the 66% lubricating oil emulsion.

TAR-O-WASH may be also had in the proportion of 37% tar and 46% lubricating oil, if so specified. The undesirable tar acids, which reduce efficiency and cause burning, have been entirely removed from our tar oil sprays.

Write for full information and quantity prices. Do not purchase your dormant spray until you have Pratt's prices.

SUMMER SCALECIDE

Diluted 1-100 and combined with SULFOCIDE 1-200 is the ideal pink and prepink spray for apples. Kills aphis, red mite, red bug and any soft bodied insects it hits at less than the cost of nicotine alone. Is also first protection against scab. SUMMER SCALECIDE is unexcelled as a spreader and activator for nicotine in summer application for codling moth and late aphis. Makes an exceptional fine spreader for arsenate of lead and bordeaux. SUMMER SCALECIDE is one of the lowest priced summer oils.

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